DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: The community does not have a pumper truck to pump wastewater solids from their residential and community septic tanks. The community currently uses a trash pump to fill a homemade 500-gallon steel tank strapped onto a 25-year old truck to transport wastewater solids. The existing collection method is unsanitary and poses a public health risk to the operators and the community. The village is funded for a new sludge lagoon project but does not have a reliable method to transport waste. The pumper truck would be used by a utility authority sewage-hauling program to serve residential septic tanks not served by community sewer. The Community does not have a building to store a pumper truck to protect it from the weather and perform maintenance.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: This project will purchase a 1,250-gallon, 4WD, arctic-operation, sewer pumper truck, construct an 800-SF garage building with concrete stem-wall foundation and gravel interior floor, and provide O&M tools for the pumper truck. -15 pts unrealistic cost estimate for the pumper truck.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Haul vehicle, sewer collection	IHS Regular	1	Ea.	D
SEWER COLLECTION - Foundation - concrete foundation	IHS Regular	800	Sf.	E
SEWER COLLECTION - Shop / garage, no foundation, sewer collection	IHS Regular	800	Sf.	E

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $490,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: Thirty two homes have septic tank and drainfield services and do not have gravity sewer service.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: This project will construct approximately 2,400-LF of 8-inch, ductile-iron, gravity sewer main, eight (8) concrete manholes, 5,000-LF of gravity sewer service lines, 1,600-LF of sewer force main, one sewer lift station, and a community septic tank. The sewer force main will connect to the existing community ocean outfall.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	2400	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	5000	Ft.	C
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	1	Ea.	C
SEWER COLLECTION - Force mains, direct bury, sewer collection	IHS Regular	1600	Ft.	C
SEWER TREATMENT - Septic tank, community, sewer treatment	IHS Regular	1	Ea.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,838,604.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The City of Larsen Bay is in need of water main replacement due to electrolysis occurring on the service connection corporation stops along the ductile iron water mains. Over time the corrosion has created small holes throughout the distribution system.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Construct approximately 3,000 LF of buried water main, ten (10) isolation valves, and 3,000-LF of water service line.

Sewer: NoneW

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	3000	Ft.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	1000	Ft.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $725,620.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The City of Larsen Bay is in dire need of water main replacement due to corrosion that is occurring on the outside of the HDPE water main pipes. Over time the corrosion has created small holes throughout the distribution system. These holes have led to contamination in the community's water which in turn has created health problems for residents. This phase, phase one, is part one of two phases for replacing the water mains in the City of Larsen Bay.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replace 7,937 feet of HDPE water main with new 8 inch HDPR SDR 11 buried water main. This phase is part one of two phases for replacing the water mains in the City of Larsen Bay.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $0.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The current water impoundment is undersized for the village's water use. The village regularly runs out of water from the impoundment and is forced to pump out of a well near the WTP. This increases the cost to run the utility for water production. The village's hydroelectric generation plant also utilizes the same water impoundment. When the impoundment runs dry, the electric diesel generators are the back up source. They are expensive to run and the costs are passed along to the users increasing the residents utility bills.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: This project would upgrade the existing water impoundment to increase its capacity of water storage.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER SOURCE - Surface water impoundment, water source	IHS Regular	1	Ea.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,500,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: The village does not have a solid waste management plan. The new landfill site has homemade, 4-ft high, low-voltage, electric, perimeter fencing. Site grading is uneven and does support propper drainage.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: This project will develop a solid waste management plan, install approximately 900-LF of 6-ft high, chain-linked, periemter fencing with access gates, and regrade the site to promote propper drainage.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - General estimate, solid waste	IHS Regular	1	Ls.	D
Solid Waste A (Plan) - Management Plan, Solid Waste	IHS Regular	1	Ls.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $250,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: In the community 23 homes do not have in-house plumbing to receive water services to be provided by a currently funded USDA-RD-VSW project, AN 14-T45, W-BD. Homes cleared for service by FONSI for AN 12-T45 approved by IHS August 15, 2013.

Sewer: In the community 23 homes do not have in-house plumbing to receive sewer services to be provided by a currently funded USDA-RD-VSW project, AN 14-T45, S-BC. Homes cleared for service by FONSI for AN 12-T45 approved by IHS August 15, 2013.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: This project proposes to provide in-home plumbing for 23 houses (see attached map for locations) in conjunction with a funded RD and VSW sanitation improvement project, AN T56, W-BD. Conditional on USDA funding the mains and houses above the flood plain min.

Sewer: This project proposes to provide in-home plumbing for 23 houses (see attached map for locations) in conjunction with a funded RD and VSW sanitation improvement project, AN T56, S-BC.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	0	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	0	Ft.	C
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	0	Ea.	C
SEWER COLLECTION - Force mains, direct bury, sewer collection	IHS Regular	0	Ft.	C
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	23	Ea.	A
Sewer, Other - Other sewer	IHS Regular	1	Ls.	C
Sewer, Other - Other sewer	USDA-RD	1	Ls.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	23	Ea.	A

Water, Other - Other water	USDA-RD	1	Ls.	A

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $2,760,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: Unpermitted open dumpsite, no solid waste management plan.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Develop site selection report, select site, Solid Waste Management Plan, construct site, close old site.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Development, solid waste site	IHS Regular	4	Ac.	D
Solid Waste A (Plan) - Management Plan, Solid Waste	IHS Regular	1	Ls.	D
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	1	Ac.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $849,777.00

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DRAFT

EXISTING DEFICIENCIES:

Water: Water for the 258 residents is obtained from two existing wells, both of which are located within 15 feet of the water treatment plant (WTP). Well No. 2 provides an average of 2 gpm. Well No. 1 provides 12 gpm. Total water supply is 17 gpm. The average daily demand is 24,044 gpd (16.7 gpm) while a peak month demand is 48,088 gpd (33 gpm). The existing water supply is not keeping up with the demand.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Geophysical analysis and exploratory well drilling program to find a better water source. In conjunction with the final fesability study.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: The village has BIA funds to put hard surfacing on the road between old village of Manokotak and Manokotak Heights and the weary river road.

Ongoing Funding: Manokotak Height has a water and sewer project serving the Manokotak Heights area of the village. This project will be complete in 2013 or early 2014. This project does not serve the old village.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER SOURCE - Ground water well, water source	IHS Regular	2	Ea.	C
Water, Other - Professional Services (engineering)	IHS Regular	1	Ls.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $572,700.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: Water main leaks have been reported throughout the village resulting in up to a 27% loss in water through the distribution mains. A leak detection survey in 2009 found 10 active water main leaks (see map). Efforts to repair these leaks have shown deterioration of the service line connections.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replace aproximately 6000 LF of 4" water main and repair 79 water service connections.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	6000	Ft.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	79	Ft.	E

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,831,800.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: The discharge of untreated sewage in a residential area has been reported frequently from overflowing manholes. A 2009 survey of the sewer system found a serious blockage problem, sewer mains without slope to drain, deteriorated manholes and a lift station in need of repair.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Replace 450 LF of sewer main to correct slope. Replace 6 manholes deteriorated beyond repair. Rehabilitate 26 deterorated manholes. Remove 8,000 gal settling tank which causes main line blockages. Repair existing lift station and replace lift station pumps.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	450	Ft.	D
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	1	Ea.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $363,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: Half-acre open dump, no fence, no permit, no operational plan. No reliable equipment to operate.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: D6R Dozer, 938G Loader, 40 x 60 Equipment storage building, Conex for hazardous materials

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Shop / garage, no foundation, solid waste	IHS Regular	2400	Sf.	E
Solid Waste C (Development) - Equipment, solid waste	IHS Regular	1	Ls.	E
Solid Waste C (Development) - Equipment, solid waste	IHS Regular	1	Ls.	E
Solid Waste C (Development) - Other solid waste	IHS Regular	1	Ls.	E

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $664,000.00

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Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: Pilcher #2 is an area in Marshall with a clinic, headstart building and a new community center. The clinic and Headstart have water delivered in a small haul vehicle, Headstart also has a well, classified as a public water system with poor water quality. There is no water service of any type at the community center. There is considerable ground movement during the freeze-thaw cycle in Marshall. Sections of the water main have frozen and cracked, resulting in emergency repairs. Replacing the PVC mains is essential to ensure public health. PVC sewer mains have failed and resulted in underground and surface contamination. The PVC mains are over 25 years old and were not installed with proper bedding material.

Sewer: Homes have failing sewer services and mainlines. PVC mains have reached the end of their service life and are barely functional. Damaged pipe joints from differential movement results in infiltration of groundwater, causing excessive pumping at the lift station and consequently increased effluent entering the lagoon. There is no sewer service for the community center. The clinic and Headstart use a flush and haul system which is woefully inadequate for these facilities. Sewer mains plug-up and freeze due to reverse grade. On at least one occasion, a sewer main parted at the coupling and saturating the soil with raw sewage in the vicinity of the water service valves on a water service line. This main was rerouted as an emergency project. Manholes have overflowed numerous times and spilled raw sewage on the ground.

Solid Waste: None

O & M: The existing dysfunctions resulting from the numerous freeze-ups and leaks into and out of the compromised PVC piping have caused backed-up sewage into homes, inability for the operators to repair and city not able to shut off services to non-paying customers.

PROPOSED FACILITIES:

Water: Replace buried PVC main and service lines with HDPE arctic pipe. Upgrade or install new house plumbing because the old plumbing connections is not of the proper type to connect to the new HDPE fittings.

Sewer: Replace buried PVC main and service lines with HDPE arctic pipe. Upgrade or install new house plumbing because the old plumbing connections is not of the proper type to connect to the new HDPE fittings.

Solid Waste: None

O & M: The cost savings of repeated attempts to thaw recurring frozen sections of pipe and restored revenues will offset much of the capital cost over the life of the project.

CIP Details:

Related Projects: Input relation to other projects here for the planned construction year

Ongoing Funding: Test

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	2000	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	2400	Ft.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	2300	Ft.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	2400	Ft.	C
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	22	Ea.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	300	Ft.	A
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	300	Ft.	A
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	22	Ea.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $3,310,000.00

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EXISTING DEFICIENCIES:

Water: Pilcher #2 is an area in Marshall with a clinic, headstart building and a new community center. The clinic and Headstart have water delivered in a small haul vehicle, Headstart also has a well, classified as a public water system with poor water quality. There is no water service of any type at the community center.

Sewer: There is no sewer service for the community center. The clinic and Headstart use a flush and haul system which is woefully inadequate for these facilities.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Piped water service.

Sewer: Piped sewer service.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	1400	Ft.	A
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	520	Ft.	A
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	2400	Ft.	A
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	300	Ft.	A

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,988,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
DRAFT

EXISTING DEFICIENCIES:

Water: Main lines and service lines were initially constructed of PVC. This is a poor material for the harsh Alaskan climate and the brittle pipe is crumbling, interupting service to the oldest part of town.

Sewer: Main lines and service lines were initially constructed of PVC. This is a poor material for the harsh Alaskan climate and the brittle pipe is crumbling, interupting service to the oldest part of town.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replace buried PVC main and service lines with HDPE arctic pipe. Upgrade or install new house plumbing because the old plumbing connections is not of the proper type to connect to the new HDPE fittings.

Sewer: Replace buried PVC main and service lines with HDPE arctic pipe. Upgrade or install new house plumbing because the old plumbing connections is not of the proper type to connect to the new HDPE fittings.

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	1700	Ft.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	2000	Ft.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1500	Ft.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	2000	Ft.	C
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	22	Ea.	C
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	22	Ea.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,126,500.00

DISCLAIMER: Data displayed below is for informational purposes only.
DRAFT

EXISTING DEFICIENCIES:

Water: Main lines and service lines were initially constructed of PVC. This is a poor material for the harsh Alaskan climate and the brittle pipe is crumbling, interupting service to this part of town.

Sewer: Main lines and service lines were initially constructed of PVC. This is a poor material for the harsh Alaskan climate and the brittle pipe is crumbling, interupting service to this part of town.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replace buried PVC main and service lines with HDPE arctic pipe. Upgrade or install new house plumbing because the old plumbing connections is not of the proper type to connect to the new HDPE fittings.

Sewer: Replace buried PVC main and service lines with HDPE arctic pipe. Upgrade or install new house plumbing because the old plumbing connections is not of the proper type to connect to the new HDPE fittings.

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Mains, direct bury, sewer collection	IHS Regular	1310	Ft.	C
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	18	Ea.	C
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	2100	Ft.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1800	Ft.	C
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	18	Ea.	C
WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	2100	Ft.	C

Sewer, Other - Professional Services (engineering)	VSW	1	Ls.	C
Water, Other - Professional Services (engineering)	VSW	1	Ls.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $2,699,088.00

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DRAFT

EXISTING DEFICIENCIES:

Water:

Sewer: Sewage treatment lagoon aeration is not effective and aeration components have deteriorated to the point that failure has occured, this is not correctable by routine maintenance, and has resulted in failure to meet discharge requirements and discharge improperly treated sewage. Needs new air diffusers and blowers. 9 STEP Systems often backup and overflow onto the surrounding ground due to failed pumps and no isolation valves.

Solid Waste: None

O & M: Homeowner training required.

PROPOSED FACILITIES:

Water:

Sewer: New lagoon aeration system, blower house and valve vault upgrades at lagoon treatment works. Add isolation valves to each of 9 STEP systems and replace tanks at each of 9 STEP systems.

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Sewer, Other - Foundation - thermosyphen gravel pad, sewer other	IHS Regular	1	Sf.	D
SEWER TREATMENT - Lagoon, borrow local material, sewer treatment	IHS Regular	1	Ac.	D
Sewer, Other - Other sewer	IHS Regular	1	Ls.	D
Sewer, Other - Other sewer	IHS Regular	1	Ls.	D
SEWER COLLECTION - Force mains, direct bury, sewer collection	IHS Regular	300	Ft.	D
O & M, Other - Professional Services (engineering)	IHS Regular	1	Ls.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,060,000

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Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: Existing treatment plant is obsolete and difficult to operate. The sludge tanks have to be cleaned out manually (person enters tank and removes sludge) every day water is being made. The entire treatment system is outdated.

Sewer: 38 Homes in town use STEP systems. These must be replaced over the next 20 years. These are approaching their useful life very soon and will begin leaking and pumps are starting to fail. 9 Units have already failed.

Solid Waste: None

O & M: Homeowner training required.

PROPOSED FACILITIES:

Water: Design and construct new water treatment plant. A water source has been selected and design of this plant is currently underway with 3 year list money.

Sewer: work on the STEP system and aeriated lagoon will be a separate project.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: This project has several road crossings; the village is funded to have hard surfaced roads on the main road through the village - there are 8 to 10 crossings of this road required; therefore it would be cheaper to construct the road crossings of the distribution system prior to hard surfacing of the road.

Ongoing Funding: There is a bank erosion stabilization project by NRCS being installed on the river bank adjacent to the water plant. The river intake could be incorporated into this structure.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER TREATMENT - Treatment plant, rehabilitation, water treatment	IHS Regular	1	Ea.	C
WATER SOURCE - Surface water impoundment, water source	IHS Regular	1	Ea.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $4,000,000.00

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EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: No method for waste oil disposal, antifreeze disposal or re-use, or proper battery disposal.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Implement alternative solid waste disposal activities as prioritized in the McGrath Solid Waste Management Plan to include waste oil disposal, used antifreeze consumption, and used battery disposal.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Other solid waste	IHS Regular	1	Ls.	D
Solid Waste C (Development) - General estimate, solid waste	Other	1	Ls.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $107,911.00

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Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: None

Sewer: Mekoryuk has a small scale sewage haul system (flush tank & haul). In winter, when snow drifts sometimes cover the sewage tanks (called "doghouses") beside each home, residents must hire the city's loader to uncover the tanks so that the sewage hauler can get to them and pump sewage. Using the loader significantly increases O&M costs. It also increases wear and tear on the loader. Fourteen houses with "doghouses" are located near a force main, which carries sewage from the school and the water plant/washeteria to the sewage lagoon.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Convert the existing sewage tanks into low pressure pump stations so that sewage can be pumped from the "doghouses" to the force main.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Sewer, Other - Other sewer	IHS Regular	1	Ls.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,285,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: The flush tank & haul water haul tank, used by the city to haul water to houses, is very close to failing due to rust. Once the tank can no longer be used, the city will not be able to provide potable water to houses.

Sewer: The flush tank & haul sewage haul tank, used by the city to haul sewage away from houses, is very close to failing due to rust. Once the tank can no longer be used, the city will not be able to pick up sewage from houses. Residents will return to using honeybuckets and dumping them themselves.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: New water haul tank and trailer.

Sewer: New sewage haul tank and trailer.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Haul vehicle, sewer collection	IHS Regular	1	Ea.	E
WATER DISTRIBUTION - Haul vehicle, water distribution	IHS Regular	1	Ea.	E

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $49,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
DRAFT

EXISTING DEFICIENCIES:

Water: The washeteria is undersized for the number of users, and people spend 6+ hours doing laundry during busy times. The washeteria needs additional washers and dryers to meet existing demand.

Sewer: The pile supports for the gravity sewer line from the water plant to the central sewage pump station have failed. As a result, there are numerous bellies in the line, it is subject to freezing, and the water plant operator must throttle flow in the filter backwash lines to keep the backwash water from overwhelming the sewage line and flooding the plant. This limits his ability to backwash the filters and adequately treat water. The proposed solution is to abandon the gravity sewer main and install a small duplex pump station behind the WTP to pump the waste into an adjacent force main. Installing a pump station will be less expensive than trying to repair the 20 plus year old 2,000 ft long sewer main.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Install additional washers and dryers in the washeteria.

Sewer: Abandon the gravity sewer main and install a small duplex pump station behind the WTP to pump the waste into the adjacent force main. Installing a pump station will be less expensive than trying to repair the 20 plus year old 2,000 ft long sewer main.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	50	Ft.	D
SEWER COLLECTION - Lift station, sewer collection	IHS Regular	1	Ea.	D
Water, Other - Washeteria, water portion, no foundation, water other	IHS Regular	1	Sf.	E

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $795,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: 97 homes lack piped water service.

Sewer: 97 homes lack piped sewer collection.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Expand WTP to make space for water distribution equipment, in support of a future piped system.

Sewer: Expand WTP to make space for sewer glycol system equipment, in support of a future piped system.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER TREATMENT - Treatment plant, new, no foundation, water treatment	IHS Regular	400	Sf.	D
WATER TREATMENT - Foundation - freeze back piles, water treatment	IHS Regular	400	Sf.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $2,159,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: 97 homes do not have piped water.

Sewer: 97 homes do not have piped sewer.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Construct a vacuum sewer building in support of a future piped sewer system

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	2200	Ft.	D
SEWER COLLECTION - Foundation - freeze back piles, sewer collection	IHS Regular	1232	Sf.	D
SEWER COLLECTION - Vacuum station, no foundation, sewer collection	IHS Regular	1232	Sf.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $3,508,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: 24 houses lack water service
Sewer: 24 houses lack sewer service
Solid Waste: None
O & M: None

PROPOSED FACILITIES:

Water: Install approximately 5,500 LF water main and 35 services.
Sewer: Install approximately 2,250 LF vaccum sewer and 35 services.
Solid Waste: None
O & M: None

CIP Details:

Related Projects: None.
Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	2250	Ft.	D
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	5500	Ft.	D
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	5500	Ft.	D
SEWER COLLECTION - Service lines, above ground, sewer collection	IHS Regular	1200	Ft.	D
WATER DISTRIBUTION - Service lines, above ground, water distribution	IHS Regular	1200	Ft.	D
SEWER COLLECTION - In-house plumbing, vacuum, sewer collection	IHS Regular	24	Ea.	D
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	24	Ea.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $3,676,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: 16 houses do not have piped water.

Sewer: 16 houses do not have piped sewer.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: 16 houses will be connected to piped water & sewer.

Sewer: 16 houses will be connected to piped water & sewer.

Solid Waste: None

O & M: None

CIP Details:

Related Projects: None.

Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	1880	Ft.	D
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	3030	Ft.	D
WATER DISTRIBUTION - Service lines, above ground, water distribution	IHS Regular	2000	Ft.	D
SEWER COLLECTION - Service lines, above ground, sewer collection	IHS Regular	2000	Ft.	D
SEWER COLLECTION - In-house plumbing, vacuum, sewer collection	IHS Regular	16	Ea.	D
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	16	Ea.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $3,503,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: 17 homes do not have piped water.
Sewer: 17 homes do not have piped sewer.
Solid Waste: None
O & M: None

PROPOSED FACILITIES:

Water: Connect 17 homes to piped water.
Sewer: Connect 17 homes to piped water.
Solid Waste: None
O & M: None

CIP Details:

Related Projects: None.
Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	1300	Ft.	D
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	1400	Ft.	D
SEWER COLLECTION - Service lines, above ground, sewer collection	IHS Regular	1200	Ft.	D
WATER DISTRIBUTION - Service lines, above ground, water distribution	IHS Regular	1200	Ft.	D
SEWER COLLECTION - In-house plumbing, vacuum, sewer collection	IHS Regular	17	Ea.	D
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	17	Ea.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $3,640,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: 25 houses do not have piped water.
Sewer: 25 houses do not have piped sewer.
Solid Waste: None
O & M: None

PROPOSED FACILITIES:

Water: Construct piped water in 25 houses.
Sewer: Construct piped sewer in 25 houses.
Solid Waste: None
O & M: None

CIP Details:
Related Projects: None.
Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	1950	Ft.	D
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	2680	Ft.	D
SEWER COLLECTION - Service lines, above ground, sewer collection	IHS Regular	1250	Ft.	D
WATER DISTRIBUTION - Service lines, above ground, water distribution	IHS Regular	1250	Ft.	D
SEWER COLLECTION - In-house plumbing, vacuum, sewer collection	IHS Regular	25	Ea.	D
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	25	Ea.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $3,569,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: 19 houses do not have piped water.
Sewer: 19 houses do not have piped sewer.
Solid Waste: None
O & M: None

PROPOSED FACILITIES:

Water: Construct piped water for 19 houses.
Sewer: Construct piped sewer for 19 houses.
Solid Waste: None
O & M: None

CIP Details:

Related Projects: None.
Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, above ground, sewer collection	IHS Regular	1100	Ft.	D
WATER DISTRIBUTION - Mains, above ground, water distribution	IHS Regular	1970	Ft.	D
SEWER COLLECTION - In-house plumbing, gravity, sewer collection	IHS Regular	19	Ea.	D
WATER DISTRIBUTION - In-house plumbing, water distribution	IHS Regular	19	Ea.	D
SEWER COLLECTION - Service lines, above ground, sewer collection	IHS Regular	950	Ft.	D
WATER DISTRIBUTION - Service lines, above ground, water distribution	IHS Regular	950	Ft.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $2,118,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: None
Sewer: None
Solid Waste: Unpermitted open dump.
O & M: None

PROPOSED FACILITIES:

Water: None
Sewer: None
Solid Waste: Construct community solid waste site and close unpermitted dump.
O & M: None

CIP Details:

Related Projects: None.
Ongoing Funding: None.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Development, solid waste site	IHS Regular	5	Ac.	E
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	2	Ac.	E

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $938,632.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: None

Solid Waste: There are 15 different unapproved open dump sites around Metlakatla. Closure is needed.

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Construct transfer station facility. Closure of existing sites in order of priority per ongoing "Open Dump Cleanup and Closure Plan".

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	15	Ac.	E
Solid Waste C (Development) - Bailing facility, solid waste	IHS Regular	1	Ls.	D
Solid Waste C (Development) - Other solid waste	IHS Regular	1	Ls.	E

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $2,908,500.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The water infrastructure has not been evaluated in a VSW study for years. Need IHS or EPA money; USDA grants restrict hours of VSW time.

Sewer: The sewer infrastructure has not been evaluated in a VSW plan for years.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Site assessment and conditions report.

Sewer: Site Assessment and conditions report.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Water, Other - Planning costs	IHS Regular	1		D
Sewer, Other - Planning costs	IHS Regular	1		D
Sewer, Other - Planning costs	IHS Regular	1		D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $50,000.00

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DRAFT

EXISTING DEFICIENCIES:

Water: None

Sewer: The existing corrugated metal pipe manholes have failed. The manholes heave and most have no base left in them. The infiltration rate is high and manholes have been known to overflow in the spring. Annually, one resident is flooded with wastewater because the wet well over tops and wastewater backs up to the terminal manhole.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Replace existing corrugated metal manholes and determine if further I&I investigation is needed. Number of manholes is 44 each and the estimated cost is $11,645 each. (2012 report) We are seeking additional funds to provide a residential lift-station (RLS) to the periodically-flooding resident and plumb it above the flooding part of the gravity main (though RLS check valve would solve issue).

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	1	Ft.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $587,000.00

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Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: A string of HDPE projects in the 1980s have resulted in numerous joint failures.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replace HDPE mains that were constructed poorly throughout community. Install/replace hydrants and system isolation valves.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1	Ft.	C
Water, Other - Other water	IHS Regular	1	Ls.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $5,261,623.00

DISCLAIMER: Data displayed below is for informational purposes only.
DRAFT

EXISTING DEFICIENCIES:

Water: There is approximately 5000 lf of 1970s era PVC distribution system piping that routinely fails. Most of this is the lower loop but some is in the upper loop. Losses can drain the system at times, which can compromise circulation and freeze protection system. distribution main has significant sediment from river intake source over the years, which causes incidental turbidity when shutting off/on the circulation pumps, both lower and upper loops.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replace arctic PVC-carrier pipe circulating main with arctic HDPE-carrier pipe main. There are approximately 43 service connections that would also be swapped out. The scope would include installing 14 flush hydrants. -15 Unrealistic cost for the project and narrative and cost table do not match

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding: This project completes water main replacement begun with AN 03-N46

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	7400	Ft.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1	Ft.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,731,020.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None

Sewer: lift station force main freezes every winter. It is difficult to jet and community does not jet it. Freezing is attributable to where force main goes over a 4-feet drainage culvert; between culvert and road there is about 18 inches of cover so there is only several inches of cover between culvert and arctic pipe and road and arctic pipe. Wastewater overflows lift station #3 wet well. Last year head on the wastewater overflow, that had accumulated in the gravel back filled water line trench like a french drain, climbed the river intake service duct, filled the service box, and stunk up the river intake building until one side of the arctic box was removed. One of the lift station pumps was operational. The City could not thaw the force main line.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Replace force main. Move force main over 10 feet and bury 5-feet deep outside the road and culvert. City owns the property. Include a thaw wire in the new force main. Force main is 475 feet long.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Force mains, direct bury, sewer collection	IHS Regular	475	Ft.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $114,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
DRAFT

EXISTING DEFICIENCIES:

Water: Community has no water storage. Middle water storage tank (100,000 gal) failed catastrophically in 2013; the middle column bent sidewards, the roof joists fell, and a chunk of water tank floor sheared by the column base movement. The Middle water storage tank supply and return lines, from the Middle Pump House, froze and split in early 2013 during the lower loop freeze up event. The upper water storage tank has been dry since January 2014 because of the leaks in the transmission line to the upper tank. Leaks in transmission main are attributable to several PVC hub and gasket pipe ends pulling apart or fracturing). Historically the upper tank transmission main has been prone to failure because of ground movement. The upper and lower water tanks have supplied pressure to upper and lower loop distribution zones; system are not nearly as robust without any storage. -15 until water source issue is resolved

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Provide water storage to the community. (1) Construct new middle water storage tank (200,000 gals). (2) Construct new supply and return transmission main (dual 350 lf, total 700 lf) from Middle Pump House to new middle water storage tank. (3) Construct new upper water storage supply and return transmission main to supply existing 100,000 gallon upper water storage tank. (4) Refurbish the existing 100,000 gallon tank as the long term freeze up without water has probably compromised its ability to hold water. This project is part of an effort to provide 3-day storage to the community based on peak daily demand of 150,000 gpd or 450,000 gallons of storage total. We are holding off recommending an additional 150,000 gallon of water storage. If the ongoing exploratory well drilling project is successful, the additional storage should be located adjacent to the existing upper water storage tank; otherwise new storage should be located adjacent to the alternative river water treatment plant.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects: This project is essential to ordinary operation of the water and sewer system. Upper and lower loop tanks pressurize the system. 200,000 gallon storage assists with daily changes in demand. Design demand is 150,000 gpd. Additional demand (260,000)protects the community from unplanned disruption of water supply for up to 3 days. If the well project does not pan out the 260,000 gallon storage will be located adjacent to the water plant location.

Ongoing Funding: There is $1M for exploratory well drilling project.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	200000	Gal.	D
WATER DISTRIBUTION - Foundation - concrete foundation	IHS Regular	800	Sf.	D
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	700	Ft.	C
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1300	Ft.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,034,819.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: WELL DRILLING PROGRAM: Insufficient water production from current wells during winter months. Community relies on drawing water directly from the Yukon River into the distribution system during the winter months to avoid a system-wide freeze. They have gone on Boil Water Notice 4 out of the last 5 years. MAIN LINES: Additional main lines needed to accommodate new wells. SERVICE LINES: Individual circ pumps are needed to accomodate new wells and new main lines to reduce freeze potential. STORAGE TANK: Currently, the wells pump until they are turned off manually. Often the pumping will overflow the WSTs, wasting water in a situation where water is scarce. The insulation on the lower loop storage tank is failing. TREATMENT PLANT: Various upgrades needed. NOTICE: -15 POINTS applied since the well drilling program did not identify new wells with sufficient quantity or quality.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Source: A well drilling project has been recently funded and the results of it will determine the future community water supply. If a sufficient amount of water is found, this project will continue to develop the groundwater sources and connect them to the community system. If a sufficient amount of water is not found, this project will drill additional wells near the river. If neither the groundwater wells nor the river wells are viable, additional funds will be requred to develop a floating surface water intake structure and associated treatment train. Abandon two old wells. Check/ repair existing wells (pump and riser pipes). Main line: Connect new wells to the system including associated main line. Service lines: Individual circ pumps are needed to accommodate new wells and new main lines. WST: Automate the well pump start/ stop feature to fill the storage tanks. Replace insulation system on the lower loop storage tank. Add meters to monitor water entering distribution system. Repair erosion are at lower storage tank foundation. WTP: Repair backup generators, make building repairs to pump/ well house buildings. Add a second transfer pump at middle pump house. Project will not be approved until the results of the current well drilling program is completed.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Mains, direct bury, water distribution	IHS Regular	1	Ft.	B

WATER DISTRIBUTION - Service lines, direct bury, water distribution	IHS Regular	1	Ft.	B
WATER SOURCE - Ground water well, water source	IHS Regular	1	Ea.	B
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	1	Gal.	B
WATER TREATMENT - Treatment plant, rehabilitation, water treatment	IHS Regular	1	Ea.	B
WATER SOURCE - Surface water gallery, water source	IHS Regular	1	Ea.	B

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $3,000,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: Existing Middle Pump House houses lower pressure zone (loop) circulation and add-heat facilities. It also houses lower to upper transfer facility (pump and VFD to avoid over pumping lower zone.) Building was constructed in 1980 of 2x4 construction and loses considerable heat and needs repair. The roof and soffit have damage. The windows are long since boarded over.

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Replace middle pump house building, approximately 40x30 feet footprint. Re-use boilers, heat exchangers, pumps, and control panels.

Sewer: None

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding: Water source development. There is an exploratory well drilling project.

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER TREATMENT - Treatment plant, rehabilitation, water treatment	IHS Regular	1	Ea.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $1,200,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: The water infrastructure has not been evaluated in a VSW study for years. Need IHS or EPA money; USDA grants restrict hours of VSW time.

Sewer: The sewer infrastructure has not been evaluated in a VSW plan for years.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Site assessment and conditions report.

Sewer: Site Assessment and conditions report.

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Water, Other - Planning costs	IHS Regular	1		D
Sewer, Other - Planning costs	IHS Regular	1		D
Sewer, Other - Planning costs	IHS Regular	1		D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $50,000.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: Community lacks water storage. There was no water storage during winter 2013 - 2014. Community needs 3-day water storage in the event a well pumping failure or distribution system leak occurs. -15 until water source study is complete

Sewer: None

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: Project would provide 200,000 gallons of storage either by the existing upper water storage tank or by the river water treatment plant (if exploratory well effort fails, then Community will seek funding for river water treatment plant.) Project provides buffer in the event of a distribution system failure (leak) or an interruption of well pump supply or water plant production. It increases net peak demand storage to 3 days from less than 2 days that would be provided under the "phase 1 water storage" project. Project would also provide remote monitoring of water storage tank water level so the operator could plan his well water production course for the day or week conveniently. Centralized monitoring of other conditions, water distribution water temperature, circulation status, pressure, fuel status, and well or water plant production are warranted for any kind of intelligent management of the Mountain Village water system. Ideally storage should be 1 project but it is critical to wait for the results of the well project before locating new storage; if well project is successful - storage needs to be on upper loop, otherwise it would need provide surface water treatment CT.

Sewer: None

Solid Waste: None

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
WATER DISTRIBUTION - Water storage tank, no foundation, water distribution	IHS Regular	200000	Gal.	D
O & M, Other - O & M	IHS Regular	1	Ls.	D
WATER DISTRIBUTION - Foundation - concrete foundation	IHS Regular	1	Sf.	C

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $575,000.00

DISCLAIMER: Data displayed below is for informational purposes only.
Updates Completed By Engineer

EXISTING DEFICIENCIES:

Water: None

Sewer: Sewer service lines and arctic boxes have been jacked and are succeptable to freeze. Waste water is discharged to the ground regularly.

Solid Waste: None

O & M: None

PROPOSED FACILITIES:

Water: None

Sewer: Replace arctic boxes and sewer service lines.

Solid Waste: None

O & M: None

CIP Details:

Related Projects:

Ongoing Funding:

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
SEWER COLLECTION - Service lines, direct bury, sewer collection	IHS Regular	1	Ft.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $989,688.00

DISCLAIMER: Data displayed below is for informational purposes only.

EXISTING DEFICIENCIES:

Water: None.

Sewer: None.

Solid Waste: Landfill not approved and at capacity.

O & M: None.

PROPOSED FACILITIES:

Water: None

Sewer: None

Solid Waste: Develop SW site selection report, select site, SW Management Plan, construct site, close old site if necessary.

O & M: None

COST ESTIMATE

Scope Item	Funding Source	Quantity	Units	Health Impact Tier
Solid Waste C (Development) - Development, solid waste site	IHS Regular	5	Ac.	D
Solid Waste B (Closure) - Closure, solid waste site	IHS Regular	1	Ac.	D
Solid Waste C (Development) - Other solid waste	IHS Regular	1	Ls.	D

Health Impact Tier:
A - First Service
B - Regulatory Compliance
C - Essential Upgrades
D - Beneficial Upgrades
E - Desired Upgrades

Total Costs: $971,383.00